

Appl. No. 09/695,155
Atty. Docket No. 8284
Amdt. dated December 16, 2003
Reply to Office Action of September 16, 2003
Customer No. 27752

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A flexible mask for forming a pattern layer on a papermaking belt in a process including curing a photosensitive material, the flexible mask comprising a continuous flexible film structure having a top side and a bottom side opposite to the top side, the flexible mask further having a pattern of transparent regions and opaque regions, wherein the opaque regions comprise at least first opaque regions having a first opacity and second opaque regions having a second opacity different from the first.
2. (Original) The mask according to Claim 1, wherein the transparent regions and the opaque regions comprise a non-random and repeating pattern.
3. (Original) The mask according to Claim 2, wherein the opaque regions comprise a substantially continuous pattern, a substantially semi-continuous pattern, a pattern formed by a plurality of discrete areas, or any combination thereof.
4. (Original) The mask according to Claim 2, wherein the first opaque regions and the second opaque regions comprise a non-random and repeating pattern.
5. (Original) The mask according to Claim 4, wherein the second opaque regions comprise regions adjacent to the first opaque regions.

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6. (Original) The mask according to Claim 1, wherein the opaque regions comprise at least third opaque regions having a third opacity intermediate the first opacity and the second opacity.
7. (Original) The mask according to Claim 1, wherein the opaque regions comprise at least one region comprising a gradient opacity that gradually changes in at least one direction.
8. (Original) The mask according to Claim 1, further comprising a pattern of protrusions extending from at least one of the top side and the bottom side of the mask.
9. (Original) The mask according to Claim 8, wherein the pattern of protrusions comprises a substantially continuous pattern, a substantially semi-continuous pattern, a pattern formed by a plurality of discrete protuberances, or any combination thereof.
10. (Original) The mask according to Claim 8, wherein the pattern of protrusions correlates with the pattern of transparent regions and opaque regions to form a combined non-random and repeating pattern.
11. (Currently Amended) A flexible mask for forming a pattern layer on a papermaking belt in a process including curing a photosensitive resin, the flexible mask comprising a continuous flexible film structure having a top side and a bottom side opposite to the top side, the flexible mask further having a first pattern of transparent regions and opaque regions, and a second pattern of protrusions outwardly extending from at least one of the top side and the bottom side of the mask.

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12. (Original) The mask according to Claim 11, wherein the first pattern correlates with the second pattern to form a combined non-random and repeating pattern.
13. (Original) The mask according to Claim 12, wherein the opaque regions comprise distal surfaces of the protrusions.
14. (Original) The mask according to Claim 11, wherein the first pattern of transparent and opaque regions is independent and separable from the second pattern of protrusions.
15. (Original) The mask according to Claim 14, wherein the mask comprises a composite structure formed by at least a first element and a second element juxtaposed therewith, wherein the first element forms the first pattern, and the second element forms the second pattern.
16. (Currently Amended) A flexible mask, in combination with a source of curing radiation, for forming a pattern layer on a papermaking belt in a process including curing a curable material having a first thickness, the flexible mask comprising a continuous flexible film structure having two opposite sides and configured to be positioned between the source of curing radiation and the curable material to selectively shield the curable material from the curing radiation, the flexible mask having a pattern of transparent regions and opaque regions therein,

wherein the opaque regions comprise at least first opaque regions and second opaque regions, the first opaque regions having a first opacity, and the second opaque regions having a second opacity less than the first opacity, wherein

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the first opaque regions shields first areas of the curable material from the curing radiation to cause the first regions remain uncured through the first thickness of the curable material,

the second opaque regions partially shield second areas of the curable material to allow the curing radiation to cure the second areas of the curable material through a second thickness less than the first thickness, and

the transparent regions leave third areas of the curable material unshielded to allow the curing radiation to cure the third areas of the curable material through the first thickness.

17. (Currently Amended) A flexible mask, in combination with a source of curing radiation, for forming a pattern layer on a papermaking belt in a process including curing a curable material having a first thickness, the flexible mask comprising a continuous flexible film structure having two opposite sides and configured to be positioned between the source of curing radiation and the curable material to selectively shield the curable material from the curing radiation, the mask having a pattern of transparent regions and opaque regions,

wherein the opaque regions comprise regions having gradient opacity gradually changing in at least one direction, to shield selected areas of the curable material from the curing radiation such as to cause said selected areas to cure through a gradually changing thickness.

18. (Original) The mask according to Claims 16 or 17, further comprising a pattern of protrusions extending from at least one side of the mask.

19-26 (withdrawn)